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Title of Document Transmitted:	TRANSMITTAL SHEETS AND BRIEF OF APPELLANT.
Applicant:	Paul H. Phibbs, Jr.
Serial No.:	09/943,059
Filed:	August 30, 2001
Group Art Unit:	3627
Title:	ALLOCATED BALANCES IN A NET INTEREST REVENUE IMPLEMENTATION FOR FINANCIAL PROCESSING IN A RELATIONAL DATABASE MANAGEMENT SYSTEM
Our Ref. No.:	9512

Please charge all fees to Deposit Account No. 14-0225 of NCR Corporation, the assignee of the present application.

By. George H. Gates

Name: George H. Gates

Reg. No.: 33,500

I hereby certify that this paper is being transmitted by facsimile to the U.S. Patent and Trademark Office on the date shown below.

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Due Date: May 23, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Paul H. Phibbs, Jr. Examiner: Andrew J. Rudy
Serial No.: 09/943,059 Group Art Unit: 3627
Filed: August 30, 2001 Docket: 9512
Title: ALLOCATED BALANCES IN A NET INTEREST REVENUE IMPLEMENTATION FOR
FINANCIAL PROCESSING IN A RELATIONAL DATABASE MANAGEMENT SYSTEM

CERTIFICATE OF MAILING OR TRANSMISSION UNDER 37 CFR 1.8

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on May 23, 2005.

By: George H. Gates

Name: George H. Gates

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

We are transmitting herewith the attached:

- ☒ Transmittal sheet, in duplicate, containing a Certificate of Mailing or Transmission under 37 CFR 1.8.
- ☒ Brief of Appellant(s).
- ☒ Charge the Fee for the Brief of Appellant(s) in the amount of \$500.00 to the Deposit Account.

Please charge all fees to Deposit Account No. 14-0225 of NCR Corporation (the assignee of the present application). A duplicate of this paper is enclosed.

Customer Number 22462**GATES & COOPER LLP**

Howard Hughes Center
6701 Center Drive West, Suite 1050
Los Angeles, CA 90045
(310) 641-8797

By: George H. Gates

Name: George H. Gates

Reg. No.: 33,500

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MAY 23 2005

Due Date: May 23, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:)	
)	
Inventor: Paul H. Phibbs, Jr.)	Examiner: Andrew J. Rudy
)	
Serial #: 09/943,059)	Group Art Unit: 3627
)	
Filed: August 30, 2001)	Appeal No.: _____
)	
Title: ALLOCATED BALANCES IN A NET)	
INTEREST REVENUE)	
IMPLEMENTATION FOR FINANCIAL)	
PROCESSING IN A RELATIONAL)	
DATABASE MANAGEMENT SYSTEM)	

BRIEF OF APPELLANT

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In accordance with 37 CFR §41.37, Appellant's attorney hereby submits the Brief of Appellant on appeal from the final rejection in the above-identified application as set forth in the Office Action dated December 28, 2004.

Please charge the amount of \$500.00 to cover the required fee for filing this Brief as set forth under 37 CFR §41.20(b)(2) to Deposit Account No. 14-0225 of NCR Corporation, the assignee of the present application. Also, please charge any additional fees or credit any overpayments to Deposit Account No. 14-0225.

I. REAL PARTY IN INTEREST

The real party in interest is NCR Corporation, the assignee of the present application.

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II. RELATED APPEALS AND INTERFERENCES

There are related appeals in the following co-pending and commonly-assigned patent applications:

Application Serial No. 09/608,355, filed on June 29, 2000, by George R. Hood et al., entitled ADVANCED AND BREAKTHROUGH NET INTEREST REVENUE IMPLEMENTATION FOR FINANCIAL PROCESSING IN A RELATIONAL DATABASE MANAGEMENT SYSTEM, attorney's docket number 9006 (30145.401US01);

Application Serial No. 09/610,646, filed on June 29, 2000, by George R. Hood et al., entitled BASIC AND INTERMEDIATE NET INTEREST REVENUE IMPLEMENTATIONS FOR FINANCIAL PROCESSING IN A RELATIONAL DATABASE MANAGEMENT SYSTEM, attorney's docket number 8980 (30145.397US01);

Application Serial No. 09/608,682, filed on June 29, 2000, by George R. Hood, entitled RISK PROVISION IMPLEMENTATION FOR FINANCIAL PROCESSING IN A RELATIONAL DATABASE MANAGEMENT SYSTEM, attorney's docket number 9015 (30145.392US01); and

Application Serial No. 09/608,681, filed on June 29, 2000, by George R. Hood et al., entitled OTHER REVENUE IMPLEMENTATION FOR FINANCIAL PROCESSING IN A RELATIONAL DATABASE MANAGEMENT SYSTEM, attorney's docket number 9015 (30145.391US01).

III. STATUS OF CLAIMS

Claims 1-30 are pending in the application.

Claims 1-30 were rejected under 35 U.S.C. §103(a) as being unpatentable in view of "College Accounting, Seventh Edition," to Price.

Claims 1-30 are being appealed.

IV. STATUS OF AMENDMENTS

No amendments have been made subsequent to the final Office Action.

V. SUMMARY OF THE INVENTION

Appellant's independent claims 1, 11 and 21 are generally directed to an invention that performs financial processing in a computer.

Independent claim 1 is directed to a method of performing financial processing in a computer. The method includes accessing account, event and organization attributes from a database accessible by the computer, wherein: (1) the account attributes comprise data about accounts being measured, (2) the event attributes comprise data about account-related transactions, and (3) the organization attributes comprise data about the organization's financial status. The method also includes performing one or more profitability calculations in the computer using the account, event and organization attributes accessed from the database, as well as one or more profit factors and one or more rules, wherein the profitability calculations include:

$$\begin{aligned}\text{Profit} &= \text{Net Interest Revenue (NIR)} \\ &+ \text{Other Revenue (OR)} \\ &- \text{Direct Expense (DE)} \\ &- \text{Indirect Expense (IE)} \\ &- \text{Risk Provision (RP)}\end{aligned}$$

The Net Interest Revenue (NIR) is calculated as:

$$\begin{aligned}\text{NIR} &= \text{Interest Revenue} \\ &- \text{Cost of Funds} \\ &+ \text{Value of Funds} \\ &- \text{Interest Expense} \\ &+ \text{Earnings on Allocated Equity;}\end{aligned}$$

The Cost of Funds includes Allocated Balances that are used to assign balance sheet amounts that are not actual account balances to the accounts for the calculated Net Interest Revenue (NIR).

Independent claim 11 is directed to a system for financial processing. The system includes a computer and logic performed by the computer. The logic includes accessing account, event and organization attributes from a database accessible by the computer, wherein: (1) the

account attributes comprise data about accounts being measured, (2) the event attributes comprise data about account-related transactions, and (3) the organization attributes comprise data about the organization's financial status. The logic also includes performing one or more profitability calculations in the computer using the account, event and organization attributes accessed from the database, as well as one or more profit factors and one or more rules, wherein the profitability calculations include:

$$\begin{aligned}\text{Profit} &= \text{Net Interest Revenue (NIR)} \\ &+ \text{Other Revenue (OR)} \\ &- \text{Direct Expense (DE)} \\ &- \text{Indirect Expense (IE)} \\ &- \text{Risk Provision (RP)}\end{aligned}$$

The Net Interest Revenue (NIR) is calculated as:

$$\begin{aligned}\text{NIR} &= \text{Interest Revenue} \\ &- \text{Cost of Funds} \\ &+ \text{Value of Funds} \\ &- \text{Interest Expense} \\ &+ \text{Earnings on Allocated Equity;}\end{aligned}$$

The Cost of Funds includes Allocated Balances that are used to assign balance sheet amounts that are not actual account balances to the accounts for the calculated Net Interest Revenue (NIR).

Independent claim 21 is directed to an article of manufacture embodying logic for performing financial processing in a computer. The logic includes accessing account, event and organization attributes from a database accessible by the computer, wherein: (1) the account attributes comprise data about accounts being measured, (2) the event attributes comprise data about account-related transactions, and (3) the organization attributes comprise data about the organization's financial status. The logic also includes performing one or more profitability calculations in the computer using the account, event and organization attributes accessed from the database, as well as one or more profit factors and one or more rules, wherein the profitability calculations include:

$$\begin{aligned}\text{Profit} &= \text{Net Interest Revenue (NIR)} \\ &+ \text{Other Revenue (OR)} \\ &- \text{Direct Expense (DE)} \\ &- \text{Indirect Expense (IE)} \\ &- \text{Risk Provision (RP)}\end{aligned}$$

The Net Interest Revenue (NIR) is calculated as:

$$\begin{aligned}\text{NIR} &= \text{Interest Revenue} \\ &- \text{Cost of Funds} \\ &+ \text{Value of Funds} \\ &- \text{Interest Expense} \\ &+ \text{Earnings on Allocated Equity;}\end{aligned}$$

The Cost of Funds includes Allocated Balances that are used to assign balance sheet amounts that are not actual account balances to the accounts for the calculated Net Interest Revenue (NIR).

With regard to the claims, Appellant's attorney requests that the Board refer to the specification generally. Specific portions of the specification that directly relate to the claims on appeal include:

- (a) at page 5, line 1 through page 6, line 22;
- (b) at page 8, line 9 through page 12, line 18, and in FIG. 2 as reference numbers 200-214;
- (c) at page 13, line 1 through page 24, line 16;
- (d) at page 25, lines 13-22, and in FIG. 3 as reference number 314; and
- (e) at page 25, line 29 through page 27, line 28, and in FIG. 4 as reference numbers 400-404.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claims 1-30 are obvious under 35 U.S.C. §103(a) in view of "College Accounting, Seventh Edition," to Price.

VII. ARGUMENTS

A. The Office Action Rejections

In paragraph (3) of the Office Action, claims 1-30 were rejected under 35 U.S.C. §103(a) as being unpatentable over Price et al., "College Accounting, Seventh Edition," (Price).

Appellant's attorney respectfully traverses these rejections.

B. Appellant's Independent Claims

As noted above, Appellant's independent claims 1, 11 and 21 are generally directed to an invention that performs financial processing in a computer. Claim 1 is representative and is directed to a method of performing financial processing in a computer. The method comprises:

(a) accessing account, event and organization attributes from a database accessible by the computer, wherein: (1) the account attributes comprise data about accounts being measured, (2) the event attributes comprise data about account-related transactions, and (3) the organization attributes comprise data about the organization's financial status;

(b) performing one or more profitability calculations in the computer using the account, event and organization attributes accessed from the database, as well as one or more profit factors and one or more rules, wherein the profitability calculations include:

$$\begin{aligned}\text{Profit} &= \text{Net Interest Revenue (NIR)} \\ &+ \text{Other Revenue (OR)} \\ &- \text{Direct Expense (DE)} \\ &- \text{Indirect Expense (IE)} \\ &- \text{Risk Provision (RP)}\end{aligned}$$

(c) wherein the Net Interest Revenue (NIR) is calculated as:

$$\begin{aligned}\text{NIR} &= \text{Interest Revenue} \\ &- \text{Cost of Funds} \\ &+ \text{Value of Funds} \\ &- \text{Interest Expense} \\ &+ \text{Earnings on Allocated Equity};\end{aligned}$$

(d) wherein the Cost of Funds includes Allocated Balances that are used to assign balance sheet amounts that are not actual account balances to the accounts for the calculated Net Interest Revenue (NIR).

C. The Price Reference

Price is a college accounting textbook that describes accounting concepts and principles. The portions cited describe analyzing business transactions including the accounting cycle, accounting for assets and liabilities including accounts receivable and uncollectible accounts, and responsibility and cost accounting including departmentalized profit and cost centers.

D. Arguments Directed To The First Grounds for Rejection: Whether Claims 1-30 Are Obvious Under 35 U.S.C. §103(a) In View of Price.

1. Claims 1, 11 and 21

Appellant's attorney respectfully submits that Appellant's claimed invention is patentable over the Price reference. Specifically, Appellant's attorney asserts that the reference does not teach or suggest the specific combination of elements recited in Appellant's claims.

However, the Office Action asserts the following:

Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price.

Applicant is directed to the March 24, 2004 non-final Office Action, paragraph 3, regarding Price, which is incorporated herein.

Applicant's June 24, 2004 and November 3, 2004 REMARKS have been reviewed, but are not convincing. In short, Appellant's profitability calculations are common knowledge variance for defining total income less total expenses. The account, event and organization attributes, e.g., future losses, direct and indirect expenses, cost of funds, claim limitations have been common knowledge criteria within the business community for a period of time far exceeding Appellant's filing date. To have incorporated such common knowledge in the profitability calculations for Price, as modified by Official Notice, would have been obvious to one of ordinary skill in the art.

The March 24, 2004 non-final Office Action asserts the following at paragraph 3:

Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price et al. "College Accounting, Seventh Edition" (hereafter "Price").

Price discloses, e.g. pgs 28-41, 529, 531, 966-982 (Fig. 27-5), a method measuring profit based on the factors of net interest revenue, other revenues (Fig. 27-5, line 4, "Operating Revenues"), direct expenses (Fig. 27-5, line 22, "Direct Expenses"), indirect expenses (Fig. 27-5, line 30, "Indirect Expenses"), and risk (Fig. 27-5, line 6, "Less Sales Returns and Allowances"), all set up to take advantage of flexible business rules.

Official Notice is taken that performing financial processing using computer software is common knowledge in the art.

To have provided a method of performing financial processing for an account using software for a computer measuring profit based on the factors of net interest revenue, other revenues, direct expenses, indirect expenses, risk and cost of funds, all set up to take advantage of flexible business rules, the business rules to calculate known variations of one of the factors, e.g. net interest revenue, would have been obvious to one of ordinary skill in the art. Doing such would incorporate common knowledge data along with common knowledge software.

Appellant's attorney disagrees with this analysis.

Price does not teach or suggest the claimed elements of accessing account, event and organization attributes from a database accessible by the computer, wherein: (1) the account attributes comprise data about accounts being measured, (2) the event attributes comprise data about account-related transactions, and (3) the organization attributes comprise data about the organization's financial status, and performing one or more profitability calculations in the computer using the account, event and organization attributes accessed from the database, as well as one or more profit factors and one or more rules, wherein the profitability calculations include:

$$\begin{aligned}\text{Profit} &= \text{Net Interest Revenue (NIR)} \\ &+ \text{Other Revenue (OR)} \\ &- \text{Direct Expense (DE)} \\ &- \text{Indirect Expense (IE)} \\ &- \text{Risk Provision (RP)}\end{aligned}$$

More specifically, Price does not teach or suggest the claimed profitability calculations wherein the Net Interest Revenue (NIR) is calculated as:

$$\text{NIR} = \text{Interest Revenue}$$

- Cost of Funds
- + Value of Funds
- Interest Expense
- + Earnings on Allocated Equity;

Further, Price does not teach or suggest that the Cost of Funds includes Allocated Balances that are used to assign balance sheet amounts that are not actual account balances to the accounts for the calculated Net Interest Revenue (NIR).

Instead, the "Net Interest Revenue" is only referred to generally by the Office Action, no specification citation to Price is made with regard to this element, and nowhere does the reference teach or suggest the limitations of these claims. Consequently, the rejections fail to persuade.

Appellant's claimed invention provides operational advantages over the system disclosed in Price. Price reflects an outdated approach to income statements. Appellant's invention, on the other hand, describes a different, more sophisticated model for implementing profitability calculations in a computer system, as well as a different, more sophisticated set of relationships between the elements of the model. Price fails to teach or suggest the specific model, all of the elements of the model, or the relationships between the various elements.

Thus, Appellant's attorney submits that independent claims 1, 11 and 21 are allowable over Price. Further, dependent claims 2-10, 12-20 and 22-30 are submitted to be allowable over Price in the same manner, because they are dependent on independent claims 1, 11 and 21, respectively, and because they contain all the limitations of the independent claims. In addition, dependent claims 2-10, 12-20 and 22-30 recite additional novel elements not shown by Price.

2. Claims 2, 12 and 22

Claims 2, 12 and 22 recite that the Allocated Balances are selected from a group comprising Float, Fixed Assets, Payables and Receivables balances. The Office Action rejects these claims only generally, i.e., on the same basis as the independent claims, without citing any specific location within the reference as teaching these limitations. Appellant's attorney

disagrees with this analysis, and submits that nowhere does the reference teach or suggest the limitations of these claims.

3. Claims 3, 13 and 23

Claims 3, 13 and 23 recite that the accounts that receive the Allocated Balances are selected based upon the account attributes. The Office Action rejects these claims only generally, i.e., on the same basis as the independent claims, without citing any specific location within the reference as teaching these limitations. Appellant's attorney disagrees with this analysis, and submits that nowhere does the reference teach or suggest the limitations of these claims.

4. Claims 4, 14 and 24

Claims 4, 14 and 24 recite that the Allocated Balances are apportioned among the accounts using a method selected from a group comprising:

- (1) an Account Counts method that provides allocated balance amounts based on a percentage of total accounts each account represents;
- (2) an Account Balance Amount method that provides allocated balance amounts based on a percentage of total account balance each account represents;
- (3) an Event Count method that provides allocated balance amounts based on a percentage of total events each account represents; and
- (4) an Event Balance Amount method that provides allocated balance amounts based on a percentage of total event balances each account represents.

The Office Action rejects these claims only generally, i.e., on the same basis as the independent claims, without citing any specific location within the reference as teaching these limitations. Appellant's attorney disagrees with this analysis, and submits that nowhere does the reference teach or suggest the limitations of these claims.

5. Claims 5, 15 and 25

Claims 5, 15 and 25 recite performing summations over the possible balance variables for the account according to the following:

$$\text{Int Inc}(a) = \sum \text{AB}_{(\text{asset},t)}(a) * \text{eff rate}_{(\text{asset},t)}(a),$$

$$\text{COF}(a) = \sum \text{AB}_{(\text{asset},t)}(a) * R_{(\text{asset},t)}(\text{pt}(a)),$$

$$\text{Int Exp}(a) = \sum \text{AB}_{(\text{liability},t)}(a) * \text{eff rate}_{(\text{liability},t)}(a), \text{ and}$$

$$\text{VOF}(a) = \sum \text{AB}_{(\text{liability},t)}(a) * R_{(\text{liability},t)}(\text{pt}(a)),$$

wherein:

$\text{AB}_{(c,t)}(a)$ = Average Balances of account a, wherein c is a balance class and t is a balance tier,

$\text{eff rate}_{(c,t)}(a)$ = Effective interest rate for the account a,

$\text{pt}(a)$ = Product type for account a,

$R_{(c,t)}(\text{pt}(a))$ = Treatment rate for accounts of the product type given the balance class and tier,

$\text{Int Inc}(a)$ = Interest Income of account a,

$\text{COF}(a)$ = Cost of Funds for account a,

$\text{Int Exp}(a)$ = Interest Expense for account a, and

$\text{VOF}(a)$ = Value of Funds for account a.

The Office Action rejects these claims only generally, i.e., on the same basis as the independent claims, without citing any specific location within the reference as teaching these limitations. Appellant's attorney disagrees with this analysis, and submits that nowhere does the reference teach or suggest the limitations of these claims.

6. Claims 6, 16 and 26

Claims 6, 16 and 26 recite that an Intermediate tier calculation of the Allocated Balances allows for multiple balances on a single account, as well as the determination of treatment rate based on product type and balance type. The Office Action rejects these claims only generally, i.e., on the same basis as the independent claims, without citing any specific location within the

reference as teaching these limitations. Appellant's attorney disagrees with this analysis, and submits that nowhere does the reference teach or suggest the limitations of these claims.

7. Claims 7, 17 and 27

Claims 7, 17 and 27 recite that an Advanced tier calculation of the Allocated Balances allows for specification of a product-level prepayment rate for the accounts. The Office Action rejects these claims only generally, i.e., on the same basis as the independent claims, without citing any specific location within the reference as teaching these limitations. Appellant's attorney disagrees with this analysis, and submits that nowhere does the reference teach or suggest the limitations of these claims.

8. Claims 8, 18 and 28

Claims 8, 18 and 28 recite that an Advanced tier calculation of the Allocated Balances allows loan spread, deposit spread and asset/liability spread to be separated and assigned to the accounts that generate the spreads. The Office Action rejects these claims only generally, i.e., on the same basis as the independent claims, without citing any specific location within the reference as teaching these limitations. Appellant's attorney disagrees with this analysis, and submits that nowhere does the reference teach or suggest the limitations of these claims.

9. Claims 9, 19 and 29

Claims 9, 19 and 29 recite that a Breakthrough tier calculation of the Allocated Balances uses a transfer price for every account based on matched maturity funding and predicted account behaviour. The Office Action rejects these claims only generally, i.e., on the same basis as the independent claims, without citing any specific location within the reference as teaching these limitations. Appellant's attorney disagrees with this analysis, and submits that nowhere does the reference teach or suggest the limitations of these claims.

10. Claims 10, 20 and 30

Claims 10, 20 and 30 recite that a Breakthrough tier calculation of the Allocated Balances allows behavioral features, product and account features to be used to identify a transfer rate. The Office Action rejects these claims only generally, i.e., on the same basis as the independent claims, without citing any specific location within the reference as teaching these limitations. Appellant's attorney disagrees with this analysis, and submits that nowhere does the reference teach or suggest the limitations of these claims.

VIII. CONCLUSION

In light of the above arguments, Appellant's attorney respectfully submits that the cited references do not anticipate nor render obvious the claimed invention. More specifically, Appellant's claims recite novel physical features which patentably distinguish over any and all references under 35 U.S.C. §§ 102 and 103.

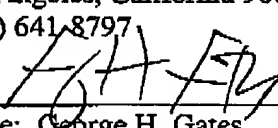
As a result, a decision by the Board of Patent Appeals and Interferences reversing the Examiner and directing allowance of the pending claims in the subject application is respectfully solicited.

Respectfully submitted,

GATES & COOPER LLP
Attorneys for Appellant

Howard Hughes Center
6701 Center Drive West, Suite 1050
Los Angeles, California 90045
(310) 641-8797

Date: May 23, 2005

By: 
Name: George H. Gates
Reg. No.: 33,500

GHG/amb

APPENDIX

1. A method of performing financial processing in a computer, comprising:

(a) accessing account, event and organization attributes from a database accessible by the computer, wherein: (1) the account attributes comprise data about accounts being measured, (2) the event attributes comprise data about account-related transactions, and (3) the organization attributes comprise data about the organization's financial status;

(b) performing one or more profitability calculations in the computer using the account, event and organization attributes accessed from the database, as well as one or more profit factors and one or more rules, wherein the profitability calculations include:

$$\begin{aligned}\text{Profit} &= \text{Net Interest Revenue (NIR)} \\ &+ \text{Other Revenue (OR)} \\ &- \text{Direct Expense (DE)} \\ &- \text{Indirect Expense (IE)} \\ &- \text{Risk Provision (RP)}\end{aligned}$$

(c) wherein the Net Interest Revenue (NIR) is calculated as:

$$\begin{aligned}\text{NIR} &= \text{Interest Revenue} \\ &- \text{Cost of Funds} \\ &+ \text{Value of Funds} \\ &- \text{Interest Expense} \\ &+ \text{Earnings on Allocated Equity};\end{aligned}$$

(d) wherein the Cost of Funds includes Allocated Balances that are used to assign balance sheet amounts that are not actual account balances to the accounts for the calculated Net Interest Revenue (NIR).

2. The method of claim 1, wherein the Allocated Balances are selected from a group comprising Float, Fixed Assets, Payables and Receivables balances.

3. The method of claim 1, wherein the accounts that receive the Allocated Balances are selected based upon the account attributes.

4. The method of claim 1, wherein the Allocated Balances are apportioned among the accounts using a method selected from a group comprising:

(1) an Account Counts method that provides allocated balance amounts based on a percentage of total accounts each account represents;

(2) an Account Balance Amount method that provides allocated balance amounts based on a percentage of total account balance each account represents;

(3) an Event Count method that provides allocated balance amounts based on a percentage of total events each account represents; and

(4) an Event Balance Amount method that provides allocated balance amounts based on a percentage of total event balances each account represents.

5. The method of claim 1, further comprising performing summations over the possible balance variables for the account according to the following:

$$\text{Int Inc}(a) = \sum AB_{(\text{asset},t)}(a) * \text{eff rate}_{(\text{asset},t)}(a),$$

$$\text{COF}(a) = \sum AB_{(\text{asset},t)}(a) * R_{(\text{asset},t)}(\text{pt}(a)),$$

$$\text{Int Exp}(a) = \sum AB_{(\text{liability},t)}(a) * \text{eff rate}_{(\text{liability},t)}(a), \text{ and}$$

$$\text{VOF}(a) = \sum AB_{(\text{liability},t)}(a) * R_{(\text{liability},t)}(\text{pt}(a)),$$

wherein:

$AB_{(c,t)}(a)$ = Average Balances of account a , wherein c is a balance class and t is a balance tier,

$\text{eff rate}_{(c,t)}(a)$ = Effective interest rate for the account a ,

$\text{pt}(a)$ = Product type for account a ,

$R_{(c,t)}(\text{pt}(a))$ = Treatment rate for accounts of the product type given the balance class and tier,

$\text{Int Inc}(a)$ = Interest Income of account a ,

$\text{COF}(a)$ = Cost of Funds for account a ,

$\text{Int Exp}(a)$ = Interest Expense for account a , and

$\text{VOF}(a)$ = Value of Funds for account a .

6. The method of claim 1, wherein an Intermediate tier calculation of the Allocated Balances allows for multiple balances on a single account, as well as the determination of treatment rate based on product type and balance type.

7. The method of claim 1, wherein an Advanced tier calculation of the Allocated Balances allows for specification of a product-level prepayment rate for the accounts.

8. The method of claim 1, wherein an Advanced tier calculation of the Allocated Balances allows loan spread, deposit spread and asset/liability spread to be separated and assigned to the accounts that generate the spreads.

9. The method of claim 1, wherein a Breakthrough tier calculation of the Allocated Balances uses a transfer price for every account based on matched maturity funding and predicted account behaviour.

10. The method of claim 1, wherein a Breakthrough tier calculation of the Allocated Balances allows behavioral features, product and account features to be used to identify a transfer rate.

11. A system for financial processing, comprising:
a computer;

logic, performed by the computer, for:

(a) accessing account, event and organization attributes from a database accessible by the computer, wherein: (1) the account attributes comprise data about accounts being measured, (2) the event attributes comprise data about account-related transactions, and (3) the organization attributes comprise data about the organization's financial status;

(b) performing one or more profitability calculations in the computer using the account, event and organization attributes accessed from the database, as well as one or more profit factors and one or more rules, wherein the profitability calculations include:

$$\begin{array}{rcl} \text{Profit} & = & \text{Net Interest Revenue (NIR)} \\ & + & \text{Other Revenue (OR)} \end{array}$$

- Direct Expense (DE)
- Indirect Expense (IE)
- Risk Provision (RP)

(c) wherein the Net Interest Revenue (NIR) is calculated as:

$$\begin{aligned}\text{NIR} &= \text{Interest Revenue} \\ &- \text{Cost of Funds} \\ &+ \text{Value of Funds} \\ &- \text{Interest Expense} \\ &+ \text{Earnings on Allocated Equity};\end{aligned}$$

(d) wherein the Cost of Funds includes Allocated Balances that are used to assign balance sheet amounts that are not actual account balances to the accounts for the calculated Net Interest Revenue (NIR).

12. The system of claim 11, wherein the Allocated Balances are selected from a group comprising Float, Fixed Assets, Payables and Receivables balances.

13. The system of claim 11, wherein the accounts that receive the Allocated Balances are selected based upon the account attributes.

14. The system of claim 11, wherein the Allocated Balances are apportioned among the accounts using a method selected from a group comprising:

(1) an Account Counts method that provides allocated balance amounts based on a percentage of total accounts each account represents;

(2) an Account Balance Amount method that provides allocated balance amounts based on a percentage of total account balance each account represents;

(3) an Event Count method that provides allocated balance amounts based on a percentage of total events each account represents; and

(4) an Event Balance Amount method that provides allocated balance amounts based on a percentage of total event balances each account represents.

15. The system of claim 11, further comprising logic for performing summations over the possible balance variables for the account according to the following:

$$\begin{aligned}\text{Int Inc}(a) &= \sum \text{AB}_{(\text{asset},t)}(a) * \text{eff rate}_{(\text{asset},t)}(a), \\ \text{COF}(a) &= \sum \text{AB}_{(\text{asset},t)}(a) * R_{(\text{asset},t)}(\text{pt}(a)), \\ \text{Int Exp}(a) &= \sum \text{AB}_{(\text{liability},t)}(a) * \text{eff rate}_{(\text{liability},t)}(a), \text{ and} \\ \text{VOF}(a) &= \sum \text{AB}_{(\text{liability},t)}(a) * R_{(\text{liability},t)}(\text{pt}(a)),\end{aligned}$$

wherein:

$$\begin{aligned}\text{AB}_{(c,t)}(a) &= \text{Average Balances of account } a, \text{ wherein } c \text{ is a balance class} \\ &\quad \text{and } t \text{ is a balance tier,} \\ \text{eff rate}_{(c,t)}(a) &= \text{Effective interest rate for the account } a, \\ \text{pt}(a) &= \text{Product type for account } a, \\ R_{(c,t)}(\text{pt}(a)) &= \text{Treatment rate for accounts of the product type given the} \\ &\quad \text{balance class and tier,} \\ \text{Int Inc}(a) &= \text{Interest Income of account } a, \\ \text{COF}(a) &= \text{Cost of Funds for account } a, \\ \text{Int Exp}(a) &= \text{Interest Expense for account } a, \text{ and} \\ \text{VOF}(a) &= \text{Value of Funds for account } a.\end{aligned}$$

16. The system of claim 11, wherein an Intermediate tier calculation of the Allocated Balances allows for multiple balances on a single account, as well as the determination of treatment rate based on product type and balance type.

17. The system of claim 11, wherein an Advanced tier calculation of the Allocated Balances allows for specification of a product-level prepayment rate for the accounts.

18. The system of claim 11, wherein an Advanced tier calculation of the Allocated Balances allows loan spread, deposit spread and asset/liability spread to be separated and assigned to the accounts that generate the spreads.

19. The system of claim 11, wherein a Breakthrough tier calculation of the Allocated Balances uses a transfer price for every account based on matched maturity funding and predicted account behaviour.

20. The system of claim 11, wherein a Breakthrough tier calculation of the Allocated Balances allows behavioral features, product and account features to be used to identify a transfer rate.

21. An article of manufacture embodying logic for performing financial processing in a computer, comprising:

(a) accessing account, event and organization attributes from a database accessible by the computer, wherein: (1) the account attributes comprise data about accounts being measured, (2) the event attributes comprise data about account-related transactions, and (3) the organization attributes comprise data about the organization's financial status;

(b) performing one or more profitability calculations in the computer using the account, event and organization attributes accessed from the database, as well as one or more profit factors and one or more rules, wherein the profitability calculations include:

$$\begin{aligned}\text{Profit} &= \text{Net Interest Revenue (NIR)} \\ &+ \text{Other Revenue (OR)} \\ &- \text{Direct Expense (DE)} \\ &- \text{Indirect Expense (IE)} \\ &- \text{Risk Provision (RP)}\end{aligned}$$

(c) wherein the Net Interest Revenue (NIR) is calculated as:

$$\begin{aligned}\text{NIR} &= \text{Interest Revenue} \\ &- \text{Cost of Funds} \\ &+ \text{Value of Funds} \\ &- \text{Interest Expense} \\ &+ \text{Earnings on Allocated Equity};\end{aligned}$$

(d) wherein the Cost of Funds includes Allocated Balances that are used to assign balance sheet amounts that are not actual account balances to the accounts for the calculated Net Interest Revenue (NIR).

22. The article of manufacture of claim 21, wherein the Allocated Balances are selected from a group comprising Float, Fixed Assets, Payables and Receivables balances.

23. The article of manufacture of claim 21, wherein the accounts that receive the Allocated Balances are selected based upon the account attributes.

24. The article of manufacture of claim 21, wherein the Allocated Balances are apportioned among the accounts using a method selected from a group comprising:

(1) an Account Counts method that provides allocated balance amounts based on a percentage of total accounts each account represents;

(2) an Account Balance Amount method that provides allocated balance amounts based on a percentage of total account balance each account represents;

(3) an Event Count method that provides allocated balance amounts based on a percentage of total events each account represents; and

(4) an Event Balance Amount method that provides allocated balance amounts based on a percentage of total event balances each account represents.

25. The article of manufacture of claim 21, further comprising performing summations over the possible balance variables for the account according to the following:

$$\text{Int Inc}(a) = \sum AB_{(asset,t)}(a) * \text{eff rate}_{(asset,t)}(a),$$

$$\text{COF}(a) = \sum AB_{(asset,t)}(a) * R_{(asset,t)}(pt(a)),$$

$$\text{Int Exp}(a) = \sum AB_{(liability,t)}(a) * \text{eff rate}_{(liability,t)}(a), \text{ and}$$

$$\text{VOF}(a) = \sum AB_{(liability,t)}(a) * R_{(liability,t)}(pt(a)),$$

wherein:

$AB_{(c,t)}(a)$ = Average Balances of account a, wherein c is a balance class and t is a balance tier,

$\text{eff rate}_{(c,t)}(a)$ = Effective interest rate for the account a,

$pt(a)$ = Product type for account a,

$R_{(c,t)}(pt(a))$ = Treatment rate for accounts of the product type given the

balance class and tier,

Int Inc(a)	=	Interest Income of account a,
COF (a)	=	Cost of Funds for account a,
Int Exp (a)	=	Interest Expense for account a, and
VOF (a)	=	Value of Funds for account a.

26. The article of manufacture of claim 21, wherein an Intermediate tier calculation of the Allocated Balances allows for multiple balances on a single account, as well as the determination of treatment rate based on product type and balance type.

27. The article of manufacture of claim 21, wherein an Advanced tier calculation of the Allocated Balances allows for specification of a product-level prepayment rate for the accounts.

28. The article of manufacture of claim 21, wherein an Advanced tier calculation of the Allocated Balances allows loan spread, deposit spread and asset/liability spread to be separated and assigned to the accounts that generate the spreads.

29. The article of manufacture of claim 21, wherein a Breakthrough tier calculation of the Allocated Balances uses a transfer price for every account based on matched maturity funding and predicted account behaviour.

30. The article of manufacture of claim 21, wherein a Breakthrough tier calculation of the Allocated Balances allows behavioral features, product and account features to be used to identify a transfer rate.